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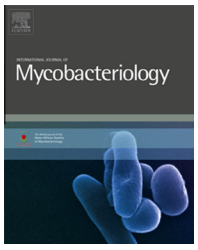

Diagnostic criteria in children with tuberculosis

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ABSTRACT

Introduction: Diagnosis of tuberculosis (TB) in children is usually based on chest radiography, tuberculin skin testing (TST), and conventional methods such as acid fast staining and culture. However, the efficiency of current TB diagnostic criteria in children has not yet been analyzed in Iran.

Material and methods: In this cross-sectional study, a total of 525 children (aged 1–15 years) were investigated. Among these cases, 198 were diagnosed as TB. The classic information, i.e., chest radiographs, age, sex, nationality, place of birth and laboratory examinations, was collected. Diagnostic and demographic characteristics of the studied children were analyzed by the available criteria.

Results: Among the studied cases, 13.1% had extra-pulmonary TB, 72.7% had pulmonary TB, and the remaining 14.1% had both pulmonary and extra-pulmonary involvement. The male to female ratio was 38.9%/61.1%. The majority of patients were Afghanis (65.2%), and the remaining were Iranians (34.8%). About 82.8% of cases had a history of close contact. The incidence of TST, radiograph findings, history contact, clinical symptoms, and microbiology as diagnostic methods was 79.3%, 83.8%, 83.8%, 85.9%, and 58.1%, respectively. In this case study, 90.4% of patients fulfilled the criteria.

Conclusions: Acid fast staining and culture analysis of gastric aspirates was determined as a high diagnostic value for the diagnosis of TB in children. However, this could not be considered as the gold standard for the diagnosis of TB in children, and other methods should be taken into consideration. Additionally, the results of analysis of the current diagnostic criteria indicated a significant accuracy and efficacy of the available criteria.

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